

CLAIMS

1. (Currently Amended) A positive temperature coefficient of resistance current limiting assembly comprising:

a positive temperature coefficient of resistance current limiting device having a body having a top having at least two adjacent [[a]] sockets therein in a side thereof, a capacitor disposed on the same said top side of said body as said socket and a positive temperature coefficient of resistance resistor,

at least one male conductive terminal in each of the at least two adjacent sockets  
socket of the body for each of said sockets being at least configured to receiveing a female conductive connection elements on an electrically isolated plug, said plug having a female conductive connection element within, said plug having an insulating open-ended sheath surrounding at least a portion of each of said female conductive elements, said socket being adapted to receive the female connection element and at least a portion of said open ended sheath,

said sockets each having peripheral walls and being adapted to receive the female  
connection elements and at least a portion of said open ended sheath, said socket being  
adapted to receive the female connection element and at least a portion of said open  
ended sheath,

each of said male conductive terminals having an upwardly extending axis and an  
end disposed below an upper edge of said peripheral walls, said side and being inside said  
socket peripheral walls having sufficiently so height such that when said electrically  
isolated plug is fully received into said its respective socket and said female conductive  
connection element is received onto said male conductive terminal, at least a portion of  
each of said sheaths is below said top edges of said peripheral walls inside said socket,  
and

an engagement member disposed on at a side of least one of said peripheral walls  
and having an engagement edge that is at least configured to engage a locking tab of said  
electrically isolated plug, wherein at least a portion of said engagement edge and at least  
a portion of each upwardly extending axis of each of said male conductive terminals are  
located at apexes of a non-oblique triangle in a plane orthogonal to each upwardly

~~extending axis of each of said male conductive terminals, on the body of the positive temperature coefficient of resistance current limiting device.~~

2. (Previously Presented) The assembly of Claim 1, wherein the capacitor has at least one male connector and there is at least one female receptacle on the positive temperature coefficient of resistance current limiting device for receiving the at least one male connector of the capacitor.
3. (Previously Presented) The assembly of Claim 1 wherein the electrically isolated plug further comprises a flexible arm with a locking tab of a size and shape such that the upper surface of the locking tab can be retainingly secured against the underside of the engagement member.
4. (Previously Presented) The assembly of Claim 3 wherein the flexible arm can be flexed so as to release the locking tab from pressing up against the underside of the engagement member.
5. (Previously Presented) The assembly of Claim 1, wherein the male connection terminal in the socket on the positive temperature coefficient of resistance current limiting device is electrically isolated from adjoining conductive parts when said electrically isolated plug is fully received into said socket and said female conductive connection element received onto said male conductive terminal with at least a portion of said sheath inside said socket.
6. (Currently Amended) The assembly of Claim 1, wherein ~~there are at least two sockets and at least two respectively corresponding male terminals, each of the at least two adjacent~~ sockets on the positive temperature coefficient of resistance current limiting device being of a different size shape to fit different sized shape plugs to facilitate connection of the correct plug to the correct male conductive terminal.

7. (Previously Presented) The assembly of Claim 1, wherein the male conductive terminal is attached to at least one plate made of conductive material.

8. (Previously Presented) The assembly of Claim 1, wherein the male conductive terminal is attached to at least one plate made of conductive material by means of welding.

9. (Previously Presented) The assembly of Claim 1, wherein the male conductive terminal is attached to at least one plate made of conductive material by means of soldering.

10. (Currently Amended) The assembly of Claim 1 wherein said at least one male conductive terminal is attached to a portion of a plate from which a previously existing male conductive terminal has been cuttingly removed.

11. (Withdrawn) A method for connecting a positive temperature coefficient of resistance resistor/overload device to electrically conductive wire, the method comprising:

providing a positive temperature coefficient of resistance resistor/overload device with at least one male conductive terminal connected to a plate protruding from a socket, and an angle protruding outwardly from the body of the positive temperature coefficient of resistance resistor/overload device in a plane parallel to the top of the device adjacent to the at least one socket;

attaching a plug assembly with at least one female conductive element, and at least one electrically isolated female wire receptacle for receiving electrical wire to the electrically conductive wire; and

inserting the plug assembly into the positive temperature coefficient of resistance resistor/overload device such that the at least one female conductive element on the plug assembly is fittingly engaged on the corresponding male conductive terminal in the socket on the positive temperature coefficient of resistance resistor/overload device.

12. (Withdrawn) The method of Claim 11 further comprising connecting a capacitor having at least one male connector into an at least one electrically isolated female receptacle for receiving the capacitor on the positive temperature coefficient of resistance resistor/overload device.

13. (Withdrawn) The method of Claim 11 further comprising lockingly engaging the topmost surface of a locking tab on a flexible arm on the plug assembly under the underside of the angle on the positive temperature coefficient of resistance resistor/overload device.

14. (Withdrawn) The method of Claim 13 further comprising flexing the flexible arm so as to release the locking tab from pressing up against the underside of the angle.

15. (Withdrawn) The method of Claim 11 further comprising making each male conductive element socket on the positive temperature coefficient of resistance resistor/overload of a different size from any other male conductive element socket on the positive temperature coefficient of resistance resistor/overload.

16. (Withdrawn) The method of Claim 11 further comprising making the sockets on the positive temperature coefficient of resistance resistor/overload device electrically isolated from adjoining conductive parts.

17. (Withdrawn) The method of Claim 11 further comprising securing the male conductive terminal to at least one plate by means of welding.

18. (Withdrawn) The method of Claim 11 further comprising securing the male conductive terminal to at least one plate by means of soldering.

19. (Withdrawn) The method of Claim 11 further comprising securing the male conductive terminal to at least one plate by means of adhesive bonding.

20. (Withdrawn) The method of Claim 11 further comprising cuttingly removing at least one male conductive terminal from at least one plate.

21. (Withdrawn) A method for disconnecting a positive temperature coefficient of resistance resistor/overload device from electrically conductive wires in a plug assembly, the method comprising:

disengaging a locking tab on a flexible arm on the plug assembly from an angle on the positive temperature coefficient of resistance resistor/overload device by flexing the arm until the locking tab is released from under the angle;

disengaging the plug assembly from at least one socket containing a male conductive element on a positive temperature coefficient of resistance resistor/overload device; and

completely disconnecting the plug assembly from the positive temperature coefficient of resistance resistor/overload device such that no electrical connection continues to exist between the plug assembly and the positive temperature coefficient of resistance resistor/overload device.

22. (New) The assembly of Claim 1 wherein there is at least one upstanding wall disposed between said two male terminals.

23. (New) The assembly of Claim 22 wherein said at least one upstanding wall is shared by both sockets.